



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/654,956

09/05/2003

Perry Philp

213-043/HRH

7920

1059 7590 01/08/2008

BERESKIN AND PARR
40 KING STREET WEST
BOX 401
TORONTO, ON M5H 3Y2
CANADA

EXAMINER

MATZEK, MATTHEW D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

01/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/654,956	Applicant(s) PHILP ET AL.	
	Examiner MATTHEW D. MATZEK	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 35-67 is/are pending in the application.
- 4a) Of the above claim(s) 35-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/25/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment dated 10/4/2007 has been fully considered and entered into the Record. Claims 1-12 and 35-45 have been withdrawn from consideration and claims 13-34 have been cancelled. Claims 46-67 are currently active.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 46-57 and 59-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atwell et al. (US 3,654,967) in view of Sasaki et al. (US 5,338,593) and Romanin (US 3,360,410).

a. Atwell et al. teach the use of multi-filamentary textiles to reinforce pressure hoses (Abstract). The reinforcing textiles are helically or spirally wound (col. 1, lines 45-48). It has been unexpectedly found that it is possible to use helically wrapped textile reinforcement, but also to find that use of such helically wrapped reinforcement results in a hose which is more flexible and has a greater ability to withstand repetitive impulse loads than hose made with braided reinforcement. As a consequence, it is possible, utilizing the teachings of the present invention, to use somewhat less material and still get an acceptable product (col. 3, lines 30-44). Atwell et al. teach that is advantageous to use reinforcing textiles in the manufacture of pressure hoses but is silent as to the nature of their structure.

b. Sasaki et al. teach a multi-axial nonwoven fabric which is in turn adhesively bonded to a warp material (Abstract). The warp material may be bonded on both sides of

the fabric material (col. 3, lines 45-53). Figures 1-3C provide for the instantly claimed warp and weft fiber orientations with the warp fibers extending in the horizontal direction. Claims 50, 51, 62 and 63 are provided for as Figure 3C shows the weft yarns extending at an angle of substantially 45°. Further support for this specific angle value is provided by the Abstract, which states that the yarns are oriented in right triangles. Sasaki et al. are silent as to the use of spreader yarns.

c. Romanin teaches a method of making a nonwoven twill web, which comprises two straight parallel essentially inextensible and stress resisting side yarns **10** and **11** defining the parallel side edges of the network to be produced. Around the side yarns are a plurality of web forming yarns that continuously encircle both side yarns at locations essentially adjacent to the plane defined by said side yarns (col. 1, lines 51-68). The various yarns of the invention may be bonded to one another via suitable binding agents (col. 2, lines 1-5).

d. Since Atwell, Sasaki et al. and Romanin are from the same field of endeavor (i.e. reinforcement fabrics), the purpose disclosed by Sasaki et al. and Romanin would have been recognized in the pertinent art of Atwell et al.

a. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Atwell with reinforcing textiles of Sasaki et al. and Romanin with the motivation of creating a pressure hose with a good balance of structural strength and dimensional stability (col. 1, lines 55-60, Sasaki et al.). The combination of the applied references results in the replacement of the reinforcing textile of Atwell et al. with that of Sasaki et al. and Romanin provides the claimed

spreader yarns. The claimed invention does not preclude the presence of other materials in conjunction with the claimed conduit. Claim 67 is rejected as it would have been obvious at the time the invention was made to a person skill in the art to have laterally offset the first substrate from the second substrate of Sasaki et al. The skilled artisan would have been motivated by the desire to selectively impart reinforcement to one substrate over a second or use the excess fabric for bonding/attachment to another substrate.

3. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atwell et al. (US 3,654,967) in view of Sasaki et al. (US 5,338,593) and Romanin (US 3,360,410) as applied to claim 57 above, and further in view of Waters (US 6,158,447). The disclosures of Atwell et al., Sasaki et al. and Romanin are silent as to the use of a reinforcing wire.

a. Waters teaches a flexible duct comprising a reinforcing scrim **16** and a wire resilient helix (reinforcing wire) **14** (Figure 3). The scrim provides the duct with high tensile strength and excellent tear resistance in all directions. The wire and scrim are sandwiched between the inner and outer walls of the flexible duct (Abstract). The resilient helix provides the duct with rigidity, while allowing it to flex about several points (col. 1, lines 25-30). The tape used to form the outer wall **12** is also simultaneously fed onto the mandrel to overlap itself and to be offset (col. 2, lines 65-67).

b. Since Waters and Atwell et al. are from the same field of endeavor (i.e. fabric-reinforced articles), the purpose disclosed by Waters would have been recognized in the pertinent art of Atwell et al.

Art Unit: 1794

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the reinforcing fabric of Atwell et al. with the reinforcing wire of Waters. The skilled artisan would have been motivated by the desire to provide the reinforcing fabric with rigidity, while allowing it to flex about several points (col. 1, lines 25-30, Waters).

Response to Arguments

4. Applicant's arguments filed 10/4/2007 have been fully considered but they are not persuasive.

5. Applicant argues that Sasaki fails to indicate any specific use of the fabric which is pertinent to the present invention. The present invention claims a helically wound conduit and Examiner has relied upon Atwell et al. to provide a helically wound conduit, but fails to provide any structure for said conduit. Sasaki has been relied upon to provide a specific structural fabric to would provide the reinforcement desired by Atwell et al.

6. Applicant argues that there is nothing in Romanin which deals with any use of a Romanin type twill web which is pertinent to the claimed invention. Examiner has relied upon Romanin to provide a teaching to modify the invention of Atwell et al. to arrive at the claimed invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Leapfrog Enter., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161, 82 USPQ2d 1687, 1691 (Fed. Cir. 2007) (quoting *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1739-40, 82 USPQ2d 1385, 1395 (2007)). "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims."

Art Unit: 1794

KSR, 127 S. Ct. at 1742, 82 USPQ2d at 1397. Design incentives and market forces as well as implementing a predictable variation may also help the person of ordinary skill in the art to recognize the obviousness of claimed combinations of elements of prior art. KSR, 127 S. Ct. at 1740, 82 USPQ2d at 1396. The incorporation of two straight parallel essentially inextensible and stress resisting side yarns into the invention of Atwell et al. would yield the predictable result of providing the helically wound support with stress resistance.

7. Applicant argues that Atwell does not deal generally with reinforcement fabrics, but rather, reinforcement fabrics when applied to a pre-existing tube such as the nylon tube referred in the Atwell patent. The Atwell et al. patent is directed to a textile-reinforced hose, but clearly teaches that the textile reinforcement is an integral part of the invention. Furthermore, the presently claimed invention uses open-ended language that fails to preclude other components being combined along with the helically wound conduit.

8. Applicant argues that combination of Atwell, Sasaki and Romanin would not make obvious the invention of claim 46. Examiner has set forth *supra*, that the combination does in fact provide for the claimed invention. Applicant continues by arguing that the claim limitation of a helically wound conduit and that it further comprises a ribbon that is wound along its longitudinal axis following a helix to form the helically wound conduit distinguishes it from Atwell. The helically wound fabric of Atwell serves as the claimed conduit and the fibers of the fabric of Atwell extend in longitudinal direction as shown in Figure 4 and serves as the claimed ribbon. Sasaki and Romanin provide the claimed structure to the support fabric of Atwell.

9. Examiner's recitation of the term "anticipated" in previous Office Action dated September 11, 2007 was not intended to relate to, or propose that any claims were being rejected

Art Unit: 1794

under 35 USC 102. Examiner intended to demonstrate that the structure of the mentioned claims was provided for in the applied reference, not that the claims were anticipated.

10. Applicant argues that if one were to modify the reinforcing fabric of Atwell with the reinforcing wire of Waters one does not arrive at the helically wound conduit as set forth in claim 46 upon which claim 58 is dependent. Examiner has relied upon Waters to provide the new limitation set forth in claim 58.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

/Matthew D Matzek/

Examiner, Art Unit 1794

/Terrel Morris/
Terrel Morris
Supervisory Patent Examiner
Group Art Unit 1794